

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

see form PCT/ISA/220

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2004/009962

International filing date (day/month/year)  
01.04.2004

Priority date (day/month/year)  
04.04.2003

International Patent Classification (IPC) or both national classification and IPC  
B01D53/14, B01D53/62, B01D53/86

Applicant  
BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**International application No.  
PCT/US2004/009962**JC20 Rec'd PCT/PTO 03 OCT 2005****Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/009962

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**Box No. II Priority**

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1. ☒ The following document has not been furnished:
- ☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
  - ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	5-10, 14-16, 18, 19, 23-25, 31-35, 40-42
	No: Claims	1-4, 11-13, 17, 20-22, 26, 28-30, 36-39
Inventive step (IS)	Yes: Claims	
	No: Claims	1-42
Industrial applicability (IA)	Yes: Claims	1-42
	No: Claims	

2. Citations and explanations
- see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2004/009962

**JC20 Rec'd PCT/PTO 03 OCT 2005**

**Re Item V.**

- 1 The following documents are referred to in this communication:  
D1 : US 6 436 174 B1 (BASF AG) 20 August 2002 (2002-08-20)  
D2 : US 4 217 237 A (EXXON RESEARCH & ENGINEERING CO.) 12 August 1980 (1980-08-12)  
D3 : US 4 094 957 A (EXXON RESEARCH & ENGINEERING CO.) 13 June 1978 (1978-06-13)
- 2 In so far as what can be understood from the claims (but see point 3 below):  
The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims is not new in the sense of Article 33(2) PCT.
- 2.1 Documents D1--D4 (for citations see the International Search Report) disclose, independently from each other, the subject-matter called for in present claims 1-4, 11-13, 17, 20-22, 26, 28-30 and 36-39.
- 2.2 Presently it seems that dependent claims 5-10, 14-16, 18, 19, 23-25, 31-35 and 40-42 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

**Further remarks:**

- 3 The application does not meet the requirements of Article 6 PCT, because claims 1, 11, 17, 26 and 36 are not clear.

The term "equivalents" in said terms is not specified in the description. It is, hence, assumed that the intended meaning is:

moles of the substances present in the solution divided by the number of basic groups per molecule (e.g. amine groups in the polyamines) that can react with one acidic hydrogen; the normally used term is 'equivalent weight'.

It follows from the examples and claims of D1-D3 that all documents D1-D3 disclose solutions meeting the 'equivalents' of present independent claims.

4 If new claims are to be filed:

- 4.1 The description must be brought into conformity with the new claims to be filed; care should be taken during revision, especially of the introductory portion including any statements of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed, Article 34(2)(b) PCT; the latter applies also to amendments in general.

Amendments should be filed by way of replacement pages, avoiding unnecessary recasting of the description. In particular, fair copies of the amendments should be filed in triplicate.

In order to expedite the procedure the letter of reply should indicate the locations in the application as originally filed of the passages forming a basis for the amendments.

- 4.2 To meet the requirements of Rule 5.1 (a)(ii) PCT, the document/s/ should be identified in the description and the relevant background art disclosed therein should be briefly discussed.